CLAIMS

1. A carbonyl iron pharmaceutical composition comprising:
   (a) from about 1 percent weight to about 15 percent weight of carbonyl iron;
   (b) from about 10 percent weight to about 90 percent weight of a carrier;
   (c) from about 1 percent weight to about 25 percent weight of a swelling agent;
   (d) from about 0.1 percent weight to about 20 percent weight of a viscolyzing agent;
   (e) from about 0.1 percent weight to about 20 percent weight of a gas generating agent; and
   (f) from about 1 percent weight to about 20 percent weight of a mucoadhesive agent.

2. The composition of claim 1, wherein the dosage form is a tablet, caplet or capsule.

3. The composition of claim 1, wherein at least 70 percent of said carbonyl iron is converted to the absorbable ferrous form.

4. The composition of claim 1, wherein said composition further comprises a lubricant.

5. The composition of claim 4, wherein said lubricant comprises from about 0.1 percent weight to about 5 percent weight of the composition.

6. The composition of claim 1, wherein said composition further comprises a coating layer.

7. The composition of claim 6, wherein said coating layer comprises from about 0.1 percent weight to about 10 percent weight of the composition.

8. The composition of claim 1, wherein said composition further comprises Vitamin B12.

9. The composition of claim 1, wherein said composition further comprises Folic Acid.

10. The composition of claim 1, wherein said carrier is sorbitol.

11. The composition of claim 1, wherein said viscolyzing agent is polyethylene oxide.

12. The composition of claim 1, wherein said swelling agent is selected from the group consisting of sodium carboxymethylcellulose, calcium carboxymethylcellulose, cross-linked polyvinyl pyrrolidone, cross-linked carboxymethylcellulose, and sodium starch glycolate.

13. The composition of claim 1, wherein said mucoadhesive agent is selected from the group consisting of cross-linked polyacrylic acids and carbomers.

14. The composition of claim 1, wherein said gas generating agent is selected from the group consisting of carbonates, bicarbonates, and sulfites.

15. The composition of claim 1, wherein said carbonyl iron comprises from about 2 percent weight to about 10 percent weight of the composition.

16. The composition of claim 1, wherein said swelling agent comprises from about 5 percent weight to about 15 percent weight of the composition.

17. The composition of claim 1, wherein said viscolyzing agent comprises from about 0.25 percent weight to about 15 percent weight of the composition.

18. The composition of claim 1, wherein said gas generating agent comprises from about 0.25 percent weight to about 10 percent weight of the composition.

19. The composition of claim 1, wherein said mucoadhesive agent comprises from about 2 percent weight to about 15 percent weight of the composition.

20. A method for the treatment of iron deficiency anemia which comprises administering to a patient in need thereof an effective amount of a composition according to claim 1.

21. A method of making a carbonyl iron pharmaceutical composition comprising the steps of:

(a) blending carbonyl iron and a carrier;
(b) mixing a viscolyzing agent, a gas generating agent, a swelling agent, and a mucoadhesive agent;
(c) blending and granulating the mixture of step (a) with the mixture of step (b);
(d) forming the mixture of step (c) into a pharmaceutically acceptable dosage form.

22. The method of claim 21, wherein the method further comprises the step of coating said pharmaceutically acceptable dosage form.

23. A method for the treatment of iron deficiency anemia which comprises administering to a patient in need thereof an effective amount of a composition according to claim 22.

24. The method of claim 21, wherein said carrier is sorbitol.

25. The method of claim 21, wherein said viscolyzing agent is polyethylene oxide,

26. The method of claim 21, wherein said swelling agent is selected from the group consisting of sodium carboxymethylcellulose, calcium carboxymethylcellulose, cross-linked polyvinyl pyrrolidone, cross-linked carboxymethylcellulose, and sodium starch glycolate.

27. The method of claim 21, wherein said mucoadhesive agent is selected from the group consisting of cross-linked polyacrylic acids and carbomers.

28. The method of claim 21, wherein said gas generating agent is selected from the group consisting of carbonates, bicarbonates, and sulfites.

29. The method of claim 21, wherein said pharmaceutically acceptable dosage form is a tablet, caplet or capsule

30. The method of claim 21, wherein said carbonyl iron comprises between about 1 percent weight and about 15 percent weight of the composition.

31. The method of claim 30, wherein said carbonyl iron comprises between about 2 percent weight and about 10 percent weight of the composition.

32. The method of claim 21, wherein said swelling agent comprises between about 1 percent weight and about 25 percent weight of the composition.

33. The method of claim 32, wherein said swelling agent comprises between about 5 percent weight and about 15 percent weight of the composition.

34. The method of claim 21, wherein said viscolyzing agent comprises between about 0.1 percent weight and about 20 percent weight of the composition.

35. The method of claim 34, wherein said viscolyzing agent comprises between about 0.25 percent weight and about 15 percent weight of the composition.

36. The method of claim 21, wherein said gas generating agent comprises between about 0.1 percent weight and about 20 percent weight of the composition.

37. The method of claim 36, wherein said gas generating agent comprises between about 0.25 percent weight and about 10 percent weight of the composition.

38. The method of claim 21, wherein said mucoadhesive agent comprises between about 1 percent weight and about 20 percent weight of the composition.

39. The method of claim 38, wherein said mucoadhesive agent comprises between about 2 percent weight and about 15 percent weight of the composition.